

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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OFFICE OF THE SECRETARY

In the Matter of)
)
2000 Biennial Regulatory Review)
Spectrum Aggregation Limits)
For Commercial Mobile Radio Services)
_____)

WT Docket No. 01-14

COMMENTS OF SPRINT PCS

Luisa L. Lancetti
Vice President, PCS Regulatory Affairs
Roger C. Sherman
Senior Attorney, PCS Regulatory Affairs
401 9th Street, N.W., Suite 400
Washington, D.C. 20004
(202) 585-1924

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Attachment 1: John B. Hayes, “CMRS HHIs from Customer Share Data: An Update”

Summary

The CMRS spectrum cap has been enormously successful and has critically supported the Congressional objective of adopting “safeguards to protect the public interest in the use of spectrum,” and promoting “economic opportunity and competition.” Given the amount of spectrum currently allocated to CMRS, the 45 MHz cap guarantees that consumers will have a choice of at least four providers in every market. Clearly, the market today would not be as competitive if the Commission in 1994 had accepted the cellular carriers argument that a cap would harm consumers and distort the marketplace unfavorably.

Sprint PCS, in response to the Commission’s request for facts, hereby submits updated HHI customer market share data for January 1998 through January 2001. The data show a clear trend of increased competition in the top 25 MSAs, with the HHIs falling 1200 points during this three-year period, from 3811 in January 1998 to 2611 in January 2001. Despite this significant progress, HHI levels remain well above the 1800 level that the DOJ/FTC Merger Guidelines identify as the threshold for a “highly concentrated market.” As economist Dr. John Hayes notes in the attachment to this filing, the Commission must remain vigilant to ensure that the CMRS market remains competitive, particularly since new entry opportunities are so limited.

The spectrum cap is unlike other CMRS regulations because it does not impose any direct costs on carriers, but rather, guarantees that the CMRS market will be competitive. The cap therefore facilitates regulatory forbearance because the Commission can be confident that the CMRS market will remain competitive. Sprint PCS is concerned that if the cap is removed, the Commission may be less inclined to use its forbearance authority in the future. Thus, the question of removing the spectrum cap should not be addressed in isolation, because the cap is a fundamental component of the Commission’s deregulatory approach to the CMRS industry.

Sprint PCS recommends that the Commission adjust the cap immediately, but that it defer removing the spectrum cap completely until the consequences of such action are fully understood.

Sprint PCS urges the Commission to take four steps at this time:

1. Adjust the cap immediately to provide for an “AMPS credit.” Under this proposal, a cellular carrier committing to maintain AMPS service for a definite period of time (*e.g.*, five years) would be given an exception from the cap based upon the amount of capacity it devotes to AMPS.
2. Increase the cap level in the 3G allocation proceeding. It is difficult to make specific recommendations on an appropriate increase until it is known how much additional spectrum will be made available and what band plan the

Commission will adopt. For example, if the Commission makes 100 MHz available for 3G services, it might be appropriate to increase the cap by 25 MHz (45/55 MHz + 25 MHz = 70/80 MHz) to ensure that one or two firms do not monopolize the acquisition of 3G spectrum.

3. Sunset the cap concurrent with issuance of 3G licenses. Once the 3G auction has closed and additional competitive entry has occurred, the Commission should immediately remove the cap and instead rely on case-by-case review of proposed mergers and acquisitions.
4. Clarify that, in the interim, the Commission will entertain cap waiver requests as part of its Section 310(d) review process. By giving carriers the option to use a one-step procedure rather than a two-step procedure (*i.e.*, waiver followed by Section 310(d) review), the Commission would streamline and expedite the process for all involved, thus serving the public interest.

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COMMENTS OF SPRINT PCS

Sprint Spectrum L.P., d/b/a Sprint PCS ("Sprint PCS"), submits these comments in response to the Notice of Proposed Rulemaking ("*CMRS Cap NPRM*").¹

**I. THE CMRS SPECTRUM CAP HAS BEEN SUCCESSFUL
IN ACHIEVING ITS STATED PURPOSE**

The competition that exists today in the commercial mobile radio services ("CMRS") market has developed, in large part, due to the Commission's adoption of the spectrum cap in conjunction with the allocation of PCS spectrum. When Congress established the CMRS regulatory classification in 1993, it directed the Commission to adopt "safeguards to protect the public interest in the use of the spectrum" and measures to "promot[e] economic opportunity and competition."² The Commission sought to discharge these congressional objectives the next year by proposing a spectrum cap "to expand and diversify the CMRS market."³

¹ See 2000 Biennial Review, *CMRS Spectrum Caps*, WT Docket No. 01-14, Notice of Proposed Rulemaking, FCC 01-28 (Jan. 23, 2001), summarized in 66 Fed. Reg. 9798 (Feb. 12, 2001) ("*CMRS Cap NPRM*").

² 47 U.S.C. § 309(j)(3).

³ *CMRS Further NPRM*, 9 FCC Rcd 2863, 2882 ¶ 88 (1994).

It is instructive to remember that cellular carriers opposed the proposal at the time, because of their claim that a cap would negatively limit the additional spectrum that they could obtain within their existing markets.⁴ In 1994, various economists retained by the incumbent carriers told the Commission:

- “[T]he proposed cap is not a good idea because it is likely to harm consumers.”⁵
- A cap “will penalize low cost efficient providers of wireless service and also harm providers of innovative wireless service.”⁶
- A cap would “lead to higher costs and less innovation in wireless services. The outcome would be anti-competitive and it would harm consumers.”⁷
- A cap would “lead to reduced innovation” and the “effect on innovation could be quite large.”⁸
- A cap “will diminish future competition.”⁹
- “Spectrum caps will harm consumers.”¹⁰
- “[T]he pace and direction of technologic change will also be biased by spectrum caps. Firms will have an incentive to invest in technologies that increase the number of circuits per MHz, rather than investing in technologies that allow the use of more spectrum at frequencies not currently commercially useful. * * * A spectrum cap will bias research and devel-

⁴ The position of the incumbent industry was not unanimous, however. For instance, Sprint Corporation, which then held cellular properties, agreed that the “Commission’s concerns may be well founded. Given the limited amount of spectrum it is clear that if a provider can acquire all of the available spectrum in a particular market then that provider can stifle competition.” Sprint Comments, Docket No. 93-252, at 2 (June 20, 1994).

⁵ Affidavit of Jerry A. Hausman at 3 ¶ 5, Attachment 1 to AirTouch Comments, Docket No. 93-252 (June 20, 1994).

⁶ *Id.* at 3 ¶ 5.

⁷ *Id.* at 10 ¶ 21.

⁸ *Id.* at 11 ¶¶ 24-25. *See also id.* at 15 ¶ 32 (“[F]uture innovation could well be decreased by spectrum caps.”).

⁹ *Id.* at 13 ¶ 28.

¹⁰ R. Preston McAfee and Michael A. Williams, “Competitive Implications of Spectrum Caps,” at 11, Attachment 2 to AirTouch Comments, Docket No. 93-252 (June 20, 1994).

opment efforts in the direction of signal compression and spectrum sharing technologies so that a successful firm can expand output.”¹¹

The Commission rejected these arguments and adopted a 45 MHz cap as “a minimally intrusive means” to “preserve competitive opportunities in the CMRS market” and to ensure that the market “remains competitive and retains incentives for efficiency and innovation.”¹²

The 45 MHz spectrum cap — which guarantees that there will be a minimum of four carriers in each geographic area¹³ — has been enormously successful in achieving its stated objective. In no small part due to the cap, two new national carriers — Sprint PCS and VoiceStream — were able to acquire spectrum and enter the market. Also due to the cap, cellular carriers were able to obtain spectrum in new markets in order to establish national footprints.

American consumers have benefited enormously by this additional competitive entry. At the beginning of 1996, consumers had a choice of only two cellular carriers. The Commission noted at the time that cellular service was a “highly profitable business” and that many firms were earning “economic rents of significant proportions.”¹⁴

¹¹ *Id.* at 11 and 14.

¹² *Third CMRS Order*, 9 FCC Rcd 7988, 7999 ¶ 16 and 8104 ¶¶ 248-49 (1994) (“*First CMRS Cap Order*”).

¹³ Fifty (50) MHz of spectrum is allocated to cellular service, 120 MHz is allocated to licensed broadband PCS spectrum, and 10 MHz of SMR spectrum is attributed to the spectrum cap — 180 MHz total CMRS spectrum/45 MHz cap per carrier per market = four carriers per each market. Thirty (30 MHz) is also available in the 700 MHz band but since this spectrum will not be cleared for some years, it is not meaningful to include this additional spectrum in a current market analysis.

¹⁴ *First Annual CMRS Competition Report*, 10 FCC Rcd 8844, 8853 ¶ 28, 8871 ¶ 81 (Aug. 18, 1995).

Four years later, there were six national carriers and 69% of Americans had a choice of five or more carriers.¹⁵ Prices fell dramatically during this brief period, and the number of service options increased exponentially (e.g., “one rate” plans, free long distance). These consumer benefits are reflected by the growth in CMRS customers. There were almost 34 CMRS million customers at the beginning of 1996. By June 2000, the CMRS customer base had nearly tripled — to over 97 million.¹⁶

As the Commission determined less than two years ago, CMRS competition intensified not with the entry of a third competitor, but with the entry of the fourth and fifth competitors.¹⁷ Contrary to past predictions of dire injury, no party can claim today that the spectrum cap has “harmed consumers,” “diminished competition” or resulted in “higher costs and less innovation.” The Commission decided to retain the cap in its 1999 *First Biennial Review Spectrum Cap Order* because at the time “even the largest urban markets for mobile telephone services remain quite concentrated.”¹⁸

In reaching this conclusion, the Commission relied in part on Herfindahl-Hirschman Index (“HHI”) customer market data that Sprint PCS had submitted.¹⁹ The Commission in its *NPRM* has again sought submission of market data,²⁰ and to assist the Commission, Sprint PCS has again retained John Hayes of Charles River Associates to

¹⁵ See *Fifth Annual CMRS Competition Report*, 15 FCC Rcd 17660, 17666 (Aug. 18, 2000).

¹⁶ See CTIA Semi-Annual Wireless Industry Survey Results, available at www.wow-com.com/industry/stats/surveys/.

¹⁷ See *First Biennial Review Spectrum Cap Order*, 15 FCC Rcd 9219, 9240 ¶¶ 43-44 (Sept. 22, 1999).

¹⁸ *Id.* at 9236 ¶ 35.

¹⁹ See *id.* at 9236-37 ¶ 36. See also Sprint PCS Comments, WT Docket No. 98-205, Attachment 1, John B. Hayes, “CMRS HHIs from Customer Share Data” (Jan. 25, 1999); Sprint PCS *Ex Parte*, WT Docket No. 98-205, Attachment A (Aug. 13, 1999).

calculate HHIs for the nation's 25 most populous markets using more recent customer subscription data. Dr. Hayes' study is appended as Attachment 1.

Dr. Hayes' analysis confirms what most know intuitively — namely, the CMRS market is becoming more competitive as new entrants like Sprint PCS continue their network buildout and begin to provide meaningful alternatives to large cellular incumbents:

| <u>Date of Market Data</u> | <u>Average HHI Top 25 Markets²¹</u> |
|--------------------------------|--|
| Jan. 1996 Cellular Duopoly | 5000 |
| January 1998 | 3811 |
| July 1998 | 3797 |
| January 1999 | 3505 |
| July 1999 | 3224 |
| January 2000 | 2928 |
| July 2000 | 2800 |
| January 2001 | 2611 |

Simply put, the market today would not be as competitive if the Commission in 1994 had concurred with the cellular industry argument that the imposition of a spectrum cap would harm consumers and distort the marketplace unfavorably. The Commission deserves much credit for implementing such a highly successful, pro-competitive policy.

²⁰ See *CMRS Cap NPRM* at ¶ 13.

²¹ The DOJ/FTC Merger Guidelines specify that an HHI of over 1800 suggests a "highly concentrated market." See 1992 Horizontal Merger Guidelines, 57 Fed. Reg. § 1.5 (Sept. 10, 1992).

Although there has been significant process, the HHI in most of the largest markets remains above the 1800 level that the DOJ/FTC Merger Guidelines identify as “highly concentrated.”²² As Dr. Hayes notes, federal regulatory authorities must therefore remain vigilant and be prepared to oppose mergers that would reduce competition.²³ Caution is also in order because entry into the CMRS market is so difficult, and even if a new entrant is successful in obtaining additional spectrum, the competitive impact of new entry can take years because of the time needed for network buildout.²⁴

II. THE SPECTRUM CAP CONTINUES TO SERVE A USEFUL PURPOSE AND SHOULD BE ADJUSTED, BUT NOT REMOVED AT THIS TIME

The CMRS market is becoming more competitive, as the updated HHI data above confirm. Some parties in this proceeding will forcefully urge the Commission to declare victory and eliminate the cap. The only effect of such a dramatic change, however, would be to allow for CMRS industry consolidation — and in the process, allow the CMRS market to become *less* competitive. Sprint PCS respectfully submits that such an approach is misguided — especially if the purported purpose of such regulatory forbearance is to *promote* competition and consumer choice.²⁵

As Sprint PCS emphasized in its comments in the last *Biennial Review* proceeding, the spectrum cap is unlike all other CMRS regulations because it does not impose

²² See 1992 Horizontal Merger Guidelines, 57 Fed. Reg. 41552 § 1.5 (Sept. 10, 1992).

²³ See Hayes Paper, Attachment 1, at 6 ¶ 20.

²⁴ See *id.* at ¶ 21.

²⁵ See, e.g., 47 U.S.C. § 309(j)(3)(FCC “shall include safeguards to protect the public interest in the use of the spectrum and shall seek to promote the purposes specified in section 151 of this title and the following objectives: . . . (B) promoting economic opportunity and competition and ensuring that new and innovative technologies are readily accessible to the American people by

direct costs on carriers, but rather, guarantees that the CMRS market will be competitive. The spectrum cap thus facilitates regulatory forbearance because, with the cap, the Commission can be confident that the CMRS market will remain competitive. Sprint PCS is concerned that if the Commission abrogates the cap, it may be less inclined to use its forbearance authority in the future and may even be inclined to impose new regulations on the CMRS industry.

For example, three years ago the Commission, by a 3 to 2 vote, declined to forbear from applying to CMRS carriers Sections 201 and 202 of the Act — provisions designed for monopoly markets.²⁶ Given the dramatic growth in competition over the past three years, the Commission can, and should, forbear from applying these sections of the Act, and so long as the cap remains in place, the Commission could be confident that the CMRS market would remain competitive.²⁷ But would the Commission be willing to forbear from applying Sections 201/202 (or other statutes or rules) if the cap is lifted and as a result, the number of service providers is reduced?²⁸

avoiding excessive concentration of licenses and by disseminating license among a wide variety of applicants.”).

²⁶ See *PCIA Forbearance Order*, 13 FCC Rcd 16857 (July 2, 1998).

²⁷ There may be areas where Section 201/202 forbearance would not be appropriate. For example, the roaming provider market remains very concentrated, as Sprint PCS recently documented. See Sprint PCS Comments, Docket No. 00-193 (Jan. 5, 2001); Sprint PCS Reply Comments, Docket No. 00-193 (Feb. 5, 2001).

²⁸ Similarly, the FCC currently reviews under Section 310(d) of the Act all transfers of control among CMRS carriers, a process that delays the planned benefits of such transfers and imposes significant administrative burdens on all involved. Because the spectrum cap guarantees that there will be a minimum of four providers in each market, the FCC can, and should, forbear from undertaking a Section 310(d) review of any transaction between CMRS licensees that do not implicate the cap. Will the FCC be comfortable forbearing from conducting certain Section 310(d) reviews if the cap is removed, or will all transactions be subjected to Section 310(d) review?

Accordingly, the Commission should not consider the removal of the spectrum cap in isolation, because the cap is a critical element of the FCC's deregulatory approach to the CMRS industry. Sprint PCS therefore recommends that the Commission defer removing the spectrum cap until the consequences of removal are more fully understood — namely, whether removal would ultimately result in more regulation than would be imposed if the cap was maintained.

III. THE COMMISSION SHOULD ADJUST THE CAP IMMEDIATELY AND BE PREPARED TO SUNSET THE CAP AFTER THE 3G AUCTION LICENSES ISSUE

The CMRS market has undergone fundamental change since the Commission last examined the spectrum cap only 20 months ago.²⁹ Sprint PCS submits that it is time to plan the sunset of this regulation, and it proposes below a plan whereby the cap could be adjusted immediately and removed entirely upon the licensing of additional CMRS spectrum for 3G.

As discussed more fully below, Sprint PCS recommends that the Commission take four steps at this time: (1) adjust the cap immediately to provide for what may be described as an “AMPS credit;” (2) increase the cap level in the 3G allocation proceeding, but maintain the cap at a proportionate level to ensure that one or two entrenched carriers do not acquire all of the spectrum made available; (3) sunset the cap concurrently with the issuance of the “3G licenses”; and (4) in the interim, make clear that the Commission will entertain cap waivers as part of its Section 310(d) merger review. If the

²⁹ For example, digital subscribers outnumbered analog subscribers for the first time at the end of 1999. During 1999, the percentage of analog customers as a percent of total customers decreased from 70% to 49%. See *Fifth Annual CMRS Competition Report*, 15 FCC Rcd 17660, 17666 (2000).

FCC adopts this proposal, Sprint PCS further recommends that the Commission forbear from applying any Section 310(d) review of proposed mergers that do not implicate the cap. If the 3G auction commences in September 2002 as planned, under Sprint PCS' plan, the cap could be phased-out in two years.

A. The Commission Should Provide an AMPS Credit for Cellular Carriers Willing to Maintain AMPS for a Period of Time

The Commission has given CMRS carriers the flexibility to choose their digital 2G and 3G technologies. Some 2G/3G air interfaces are more efficient than others, but such disparities are not a matter for Commission concern because each carrier made a business decision to choose one approach over another. Cellular carriers are somewhat unique, however, because they are still required to support 1G analog service,³⁰ and AMPS is less spectrally efficient compared to 2G and 3G digital air interfaces. Thus, as a practical matter, a spectrum cap uniformly imposed on all CMRS carriers penalizes cellular carriers because of their AMPS obligation.

The Commission has announced its intention to examine whether the AMPS requirement should be eliminated.³¹ If the Commission removes the AMPS requirement, cellular carriers will be incented to replace their AMPS channels with more spectrally efficient digital 2G/3G technologies. Although a carrier's removal of AMPS may make sense for business/capacity reasons over time, premature termination would not be in the public interest.

³⁰ See 47 C.F.R. § 22.933.

³¹ See *2000 Biennial Regulatory Review Report*, Docket No. 00-175, FCC 00-456, at ¶ 67 (Jan. 17, 2001); *Updated Staff Report* at 59-60 (Jan. 17, 2001).

Specifically, AMPS continues to perform important functions for consumers and competition. AMPS is still used with most roaming, and the availability of roaming is critically important to consumers and the competition that exists today.³² Consumers with hearing aids or who must use text telephone (“TTY”) devices still find AMPS to provide superior service compared to digital-based mobile services. AMPS is also the technology used with the growing base of 911-only handsets that are often distributed free at homeless shelters and domestic violence centers.

Given the obvious public benefits of continued AMPS service, cellular carriers should not be penalized for continuing to support analog systems for an additional period of time. Sprint PCS therefore recommends that cellular carriers committing to utilize AMPS for a specific period of time (*e.g.*, five years) be immediately granted an exception from the spectrum cap based on the amount of capacity they are willing to devote to AMPS service. Under this proposal, for example, a cellular carrier agreeing to devote 10 MHz of capacity to AMPS service would be entitled to hold 55 MHz of spectrum in a particular market, even if the cap remains at 45 MHz.

B. The Commission Should Increase the Cap In Its 3G Allocation Order

One approach to cap relief is to maintain the cap but not apply it to any new spectrum that is made available. This is the approach the Commission adopted last year with the 700 MHz band.³³

³² See, *e.g.*, Sprint PCS Comments, Docket No. 00-193 (Jan. 5, 2001); Sprint PCS Reply Comments, Docket No. 00-193 (Feb. 5, 2001).

³³ See *First 700 MHz Order*, 15 FCC Rcd 476, 497-98 ¶¶ 51-53 (2000), *on recon.* 15 FCC Rcd 20845 ¶¶ 71-73 (2000). This is also the approach Senator Brownback proposes in his new bill, The Third Generation Wireless Internet Act, S.696 (April 4, 2001).

This “freeze the cap” approach works for the 700 MHz band because, at present, only 30 MHz of spectrum is available. But the same approach may not be appropriate in the pending 3G spectrum allocation (and eventual auction) where the Commission may make 90 MHz (or more) of spectrum available for CMRS. If the cap does not apply to the 3G auction, one or two entities could acquire all of the spectrum made available. Indeed, those same entities could theoretically acquire all spectrum made available in both the 3G and 700 MHz auctions. Sprint PCS submits that the better approach is to adjust the cap to ensure that acquisition of the newly available 3G spectrum is not monopolized by only one or two firms.

It is not known at this time how much spectrum the Commission will ultimately make available for the 3G auction. Determining how much the cap should be increased cannot reasonably be made until it is known how much total additional spectrum will be made available and what spectrum band plan the Commission will adopt. For example, if the Commission makes 100 MHz available for 3G services, it might be appropriate to increase the cap by 25 MHz ($45/55 \text{ MHz} + 25 \text{ MHz} = 70/80 \text{ MHz}$) so as to ensure that there will be a minimum of four competitors in each market. Depending on the band plan the Commission adopts and CMRS market conditions at the time, however, it might be more appropriate to adjust the cap to a higher level (*e.g.*, $45 \text{ MHz} + 35 \text{ MHz} = 80 \text{ MHz}$). The level of the cap is less important than the need for a cap. A cap ensures that one or two firms do not monopolize the acquisition of additional 3G spectrum.

Sprint PCS therefore recommends that the Commission increase the cap in its 3G-allocation order, so that cap constrained carriers can acquire additional 3G spectrum and can begin using the spectrum immediately.

C. The Cap Should Sunset Concurrent with the Issuance of 3G Licenses

The HHI data Sprint PCS submits as Attachment 1 confirms that the CMRS market is becoming more competitive. Sprint PCS expects that this trend will continue as new entrants continue their network buildout and as all carriers introduce advanced services such as the wireless web. If there is assurance that 3G spectrum will not be acquired by only one or two firms (because before the auction the Commission increases the cap rather than eliminates it), Sprint PCS believes that the FCC could comfortably remove the cap following the 3G auction. Once the auction is completed and the licenses are issued, the total amount of available CMRS spectrum and the initial market structure with the additional spectrum will be known. Thereafter, issues related to industry consolidation can be appropriately handled through case-by-case review, whether by the Commission under Section 310(d), DOJ/FTC under the antitrust laws, or both.

Sprint PCS therefore recommends that the Commission sunset the cap (increased prior to the 3G auction) concurrent with the date that 3G licenses are issued. By way of example, if the 3G auction commences in September 2002 as planned, the spectrum cap could be removed as early as April 2003.³⁴

³⁴ Of course, the timing would be dependent upon the length of the 3G auction and FCC processing of various license applications.

D. The Commission Should Clarify That It Will Entertain Cap Waiver Requests as Part of Its Section 310(d) Review Process

In its *First Biennial Review Order*, the Commission repeatedly invited carriers to submit waiver requests if they believed that the cap was inhibiting implementation of their business plans.³⁵ Until Cingular submitted its waiver request last month, no one carrier filed a specific waiver request — suggesting that the spectrum cap does not currently harm any providers.³⁶

Some have criticized this waiver procedure as requiring an applicant to “lay open for public scrutiny its business plans.”³⁷ To address this concern and to streamline and expedite the approval process, the Commission should announce that it will consider cap waiver requests simultaneously with license transfer applications if licensees chose to pursue such an approach.³⁸ A Section 310(d) applicant must necessarily “lay open its business plans” as part of the public interest showing. By considering the waiver request as part of the Section 310(d) process itself, however, an applicant need not pre-announce its plans. Considering the waiver request with the 310(d) process would also streamline and expedite the process for all involved.

³⁵ See *First Biennial Review Spectrum Cap Order*, 15 FCC Rcd at 9243 ¶ 52, 9255-56 ¶ 82. See also Separate Statements of Commissioners Powell and Furchtgott-Roth.

³⁶ See *Public Notice*, “Wireless Bureau Seeks Comment on Cingular Wireless LLC’s Request for Waiver to Exclude 1.5 MHz of SMR Spectrum from the CMRS Spectrum Cap,” DA 01-665 (March 14, 2001). The FCC has granted several temporary waivers of the spectrum cap to facilitate planned mergers between firms that largely served different geographic areas. Moreover, a number of large carriers have filed generic waiver requests on a national basis.

³⁷ See *First Biennial Review Spectrum Cap Reconsideration Order*, 15 FCC Rcd 22072 at ¶ 12.

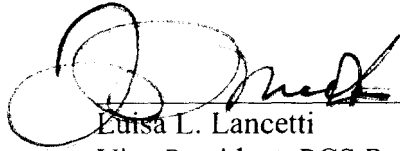
³⁸ Carriers should continue to have the option of seeking a generalized cap waiver before submitting an application under Section 310(d).

Conclusion

For the foregoing reasons, the Commission should decline to remove the CMRS spectrum cap at the present time and it should instead modify and sunset the cap as Sprint PCS proposes above.

Respectfully submitted,

SPRINT SPECTRUM L.P., d/b/a Sprint PCS



Luisa L. Lancetti
Vice President, PCS Regulatory Affairs
Roger C. Sherman
Senior Attorney, PCS Regulatory Affairs
401 9th Street, N.W., Suite 400
Washington, D.C. 20004
(202) 585-1924

Its Attorneys

April 13, 2001

CMRS HHIs FROM CUSTOMER SHARE DATA: AN UPDATE

JOHN B. HAYES

April 13, 2001

Attachment 1 to Sprint PCS Comments
WT Docket No. 01-14

Executive Summary

Sprint PCS asked me to supplement the commercial mobile radio service (“CMRS”) market Herfindahl-Hirshman Index (“HHI”) analyses that I prepared in 1999, and it provided me with updated customer market data to prepare this supplement and analysis. The data confirms what one would expect: the market for CMRS has become increasingly competitive over time, with the average HHI for the 25 most populous MSAs falling by 1200 points over three years, from 3811 in January 1998 to 2611 in January 2001. While this trend is encouraging, most of the largest CMRS markets remain concentrated. Federal regulatory authorities should continue to monitor the trend toward increasingly competitive CMRS markets and remain vigilant to insure these are lasting gains.

I. Introduction, Background and Qualifications

1. My name is John B. Hayes. I am a Principal employed by Charles River Associates, Inc., a consulting firm that applies economic analysis to issues of antitrust and regulatory policy. My work as an economist has been in the area of microeconomics, with a specialization in the study of antitrust and regulatory policies. Over the course of my professional career, I have had numerous opportunities to consider questions of market concentration in the context of mergers, acquisitions, regulatory proceedings, and other matters.
2. I was previously employed by the U.S. Department of Justice in the Antitrust Division, where my duties included assisting in the Department's evaluations of BOC applications to provide in-region long-distance services. I have also taught courses at Georgetown University and advised government officials in the United States and other countries on antitrust and telecommunications policy.
3. I earned a Ph.D. in Economics from the University of Wisconsin, where my major field of study was Industrial Organization. A copy of my curriculum vitae was previously submitted to the FCC as part of my paper that Sprint PCS attached to the comments it filed in WT Docket No. 98-205 on January 25, 1999.
4. In January 1999 and at the request of Sprint PCS, I prepared a HHI analysis of wireless telephone customer data collected by the National Families Organization ("NFO").¹ Sprint provided me at the time with customer share data for the top 25 MSAs and PMSAs for January and July of 1998.² Sprint PCS attached my paper to the comments it filed in WT Docket No. 98-205 on January 25, 1999.

¹ The HHI is the sum of the squared market shares of all market participants. The DOJ-FTC Merger Guidelines describe markets with HHIs in excess of 1800 as "highly concentrated." See 1992 Horizontal Merger Guidelines, 57 Fed. Reg. 41552 § 1.5 (Sept. 10, 1992).

² Metropolitan statistical areas ("MSAs") and primary metropolitan statistical areas ("PMSAs") are geographic areas designed by the U.S. Office of Management and Budget. The general concept of these designations is that of a core area containing a large population center together with those adjacent communities that have a high degree of cohesion with the core area. I ranked the top 25 MSAs and PMSAs by population.

5. In July 1999, and again at the request of Sprint PCS, I prepared a similar HHI analysis for the same 25 markets, but this time using January 1999 customer market data. Sprint PCS submitted the tables that I prepared in an ex parte filing it made on August 13, 1999. See Letter from Jonathan Chambers, Sprint PCS Vice President, to Ms. Magalie Roman Salas, FCC Secretary, WT Docket No. 98-205 (Aug. 13, 1999).
6. Sprint PCS recently asked me to supplement my HHI analyses for the same top 25 markets, and it supplied to me more recent NFO customer market data, including data collected in July 1999, January 2000, July 2000, and January 2001. The analysis below is based on this new market share data.
7. Market concentration is one well-recognized indicator of the ability of firms to exercise market power.³ The FCC acknowledged the significance of market concentration as an indicator of market performance when it reaffirmed the 45 MHz CMRS spectrum cap rule in 1996. As the FCC stated at that time:

The Commission staff's HHI analysis indicates that the 45 MHz CMRS spectrum cap is needed to prevent undue market concentration and the noncompetitive conditions in local markets that result from such concentration.⁴

8. The HHIs reported in this paper were calculated from customer subscription data for a subset of CMRS providers — namely, network operators that provide mobile telephony services. These data do not include customers of paging, traditional dispatch, fixed landline or other telecommunications services that some might contend potentially compete with mobile wireless telephone services. As noted, an analysis of the proper product market was not within my charter.

³ Market power is defined as the ability profitability to maintain prices above competitive levels for a significant period of time. Horizontal Merger Guidelines at § 0.1. A complete analysis of the ability of firms to exercise market power would examine market structure, including barriers to entry, the ability of fringe firms to expand output, and a careful determination of relevant markets. Such an extensive analysis is beyond the scope of this paper.

⁴ Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59, Report and Order, 11 FCC Rcd 7824, 7870 ¶ 98 (1996).

II. Description of the Data

9. The NFO is an independent, nationally recognized market research firm that collects data on mobile wireless telephone markets for sale to commercial and other customers. Sprint purchases the NFO data for market research purposes and relies upon them in the regular course of business.
10. The NFO data are collected from a short questionnaire that is mailed twice yearly to a nationally representative sample of approximately 80,000 persons. Approximately 57,000 persons respond to the questionnaire. The survey has been conducted since January 1998.
11. The survey asks wireless customers to indicate the primary wireless carrier in their household. Due to space limitations, only 15 carriers are listed on the survey instrument. Customers whose primary carrier is not listed are instructed to name their primary carrier in the space provided. As noted, paging and traditional dispatch service providers are not included in the list of named carriers.
12. This form of self-reporting is likely to under-count the customers whose carriers are not among the 15 listed carriers. It follows that the shares of carriers not listed on the survey instrument are likely to be under-estimated.
13. Despite the acknowledged limitations of these data, I believe that they provide reasonably accurate and useful measures of carrier's shares of mobile telephone customers.
14. Market shares based on the number of customers served, together with their corresponding HHIs, are an informative complement to the spectrum-based HHIs that the FCC calculated when it reaffirmed the 45 MHz CMRS spectrum cap rule in 1996. As the FCC stated at that time, spectrum is a measure of long-term capacity and is a valid measure of market share.⁵ At the same time, the FCC also acknowledged the value of HHIs based on empirical data of customer shares.⁶
The deployment of broadband PCS and wide-area SMR networks takes time, and

⁵ See Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59, Report and Order, 11 FCC Rcd 7870 ¶ 96 (1996).

⁶ *Ibid.*

the ability of these networks to exert competitive discipline in CMRS markets may be less than is suggested by their long-term capacity until these networks are deployed more fully and provide more extensive coverage.⁷ I note that the FCC cited the HHI analyses that I prepared in its 1999 spectrum cap order.⁸

III. Analysis and Results

15. Sprint PCS recently provided me with customer share data for the top 25 MSAs and PMSAs for July 1999, January 2000, July 2000, and January 2001. Table 1 presents HHIs for these CMRS service regions based upon those data.
16. The data show that HHIs in these markets have been steadily decreasing. I interpret these data — consistent with information from many other sources — as evidence that the CMRS market in these areas is becoming increasingly competitive.

IV. Conclusion

17. We now have market share data for a three-year period, from January 1998 through January 2001. The trend in the data has been consistent, and the trend has continued for a sufficiently long period of time that I am able to conclude that the CMRS market is becoming increasingly competitive. Indeed, the clear trend in the data suggests that HHIs calculated from current market shares may understate the future competitive significance of the smaller firms in these markets.⁹ The most likely explanation for this trend is that the continued network buildout of new entrants (both PCS and wide-area SMR licensees) has made these network operators more viable competitors to incumbent cellular carriers.

⁷ The Merger Guidelines recommend that market shares be calculated “using the best indicator of firms’ future competitive significance.” Both customer counts and physical capacity are specifically identified as potentially useful measures of market share. Horizontal Merger Guidelines at § 1.41.

⁸ See 1998 Biennial Regulatory Review Spectrum Aggregation Limits for Wireless Telecommunications Carriers, WT Docket No. 98-206, Report and Order, FCC 99-244, 15 FCC Rcd 9219, 9236-37 ¶ 36 (Sept. 22, 1999).

⁹ The Merger Guidelines recognize that changes in market conditions can cause the current market share of a firm to understate or overstate the firm’s future competitive significance. Horizontal Merger Guidelines at § 1.521.

18. While the trend toward increased competition is clear from the data, the HHIs in most of the 25 largest markets, based on January 2001 data, remain above 2500, which is well above the 1800 level that the DOJ/FTC Merger Guidelines identify as the threshold for a “highly concentrated” market.
19. In my January 1999 paper, I concluded that actual customer data show that CMRS markets remain “highly concentrated today”:

Absent a convincing demonstration of significant efficiencies available to holders of large blocks of spectrum, there is little reason to believe that the increases in concentration that would follow removal of the spectrum cap would enhance competition in the mobile wireless telephone markets.¹⁰

This conclusion rested on HHI indices based on market data collected in January 1998 and July 1998, when the HHIs were in the range of 3800. Given the clear and steady downward trend that has occurred since 1998, I would not draw the same conclusion today based on HHI data alone. I would instead need to conduct a more extensive analysis of the specific CMRS markets involved in a particular merger or acquisition before I could draw firm conclusions about the likely competitive effects of the transaction.

20. The trend toward increasingly competitive CMRS markets is clearly positive and of great benefit to consumers, but, as noted, the HHI in most of the largest markets remains above the level that the Merger Guidelines identify as “highly concentrated.” I believe that to insure these gains continue, federal regulatory authorities must remain vigilant and prepared to oppose mergers that would reduce competition.
21. Caution is appropriate because the market for mobile telephone services is unlike most other markets, including most other telecommunications services markets. Specifically, with CMRS, new entry is typically possible only if the FCC makes additional spectrum available and if one or more new entrants acquire this newly available spectrum. Moreover, the data clearly show that the competitive impact

¹⁰ January 1999 Hayes Paper at 7 ¶ 18.

of new entry takes time, given the coverage a new entrant needs before it begins to provide a meaningful alternative to incumbent network operators.

Table 1
HHIs in Top 25 MSAs & PMSAs

| | Jan-98 | Jul-98 | Jan-99 | Jul-99 | Jan-00 | Jul-00 | Jan-01 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Atlanta ¹ | 4329 | 4803 | 4511 | 3855 | 3078 | 3118 | 2683 |
| Baltimore | 3383 | 3334 | 3492 | 2975 | 3062 | 3084 | 2332 |
| Boston | 4001 | 3774 | 3801 | 3465 | 3015 | 2934 | 2762 |
| Chicago | 4119 | 3862 | 3360 | 3092 | 2794 | 2384 | 2434 |
| Cleveland ¹ | 3269 | 3086 | 3474 | 2717 | 2606 | 2812 | 2822 |
| Dallas | 3463 | 3229 | 3118 | 2948 | 2557 | 2891 | 2718 |
| Detroit ¹ | 4194 | 4209 | 3917 | 3712 | 3227 | 2847 | 2548 |
| Houston ² | 2799 | 3170 | 2569 | 2308 | 2142 | 2151 | 1914 |
| Los Angeles ² | 3857 | 4044 | 3276 | 3594 | 3185 | 2768 | 2927 |
| Miami ² | 3998 | 4534 | 4068 | 3194 | 2958 | 3402 | 3299 |
| Minneapolis ² | 4030 | 3687 | 3435 | 2962 | 2479 | 2638 | 2376 |
| Nassau, NY ² | 4425 | 4041 | 4429 | 3734 | 3381 | 2755 | 2981 |
| New York | 4092 | 3873 | 3383 | 3001 | 2519 | 2673 | 2440 |
| Newark ² | 4074 | 4673 | 4178 | 4289 | 4030 | 3561 | 3963 |
| Oakland ² | 2996 | 3214 | 2789 | 2946 | 2392 | 2240 | 1832 |
| Orange County ² | 4124 | 3825 | 2857 | 3217 | 3000 | 2921 | 2486 |
| Philadelphia | 3919 | 3981 | 3279 | 3543 | 3057 | 2706 | 2698 |
| Phoenix | 3353 | 3282 | 3106 | 2294 | 2322 | 1431 | 1742 |
| Pittsburgh ² | 4487 | 4664 | 4434 | 4057 | 4131 | 3989 | 3789 |
| Riverside ² | 3965 | 4067 | 3388 | 3245 | 3237 | 3128 | 2656 |
| San Diego | 3198 | 3416 | 2600 | 2764 | 2633 | 3124 | 2554 |
| Seattle ² | 4113 | 3699 | 3595 | 3116 | 2608 | 2812 | 2702 |
| St. Louis | 4111 | 4019 | 3816 | 3880 | 3420 | 3195 | 2703 |
| Tampa ² | 3763 | 3207 | 3265 | 2914 | 2629 | 2172 | 1729 |
| Washington DC | 3202 | 3237 | 3489 | 2788 | 2735 | 2273 | 2178 |
| Average | 3811 | 3797 | 3505 | 3224 | 2928 | 2800 | 2611 |

¹ Airtouch Cellular (Verizon in July 2000) was formerly marketed under the Cellular One brand name. Consequently, customer counts for Airtouch Cellular (Verizon in July 2000) and Cellular One were consolidated.

² AT&T Wireless was formerly marketed under the Cellular One brand name. Consequently, customer counts for AT&T Wireless and Cellular One were consolidated.